

WHAT IS CLAIMED IS:

1. A data reception/playback method for receiving and playing stream data including at least one of audio and video, said method comprising the steps of:

before receiving the stream data, requesting a transmitting end to transmit part or whole of a playback start position table including at least one position where data playback can be started from some midpoint in the stream data;

receiving the playback start position table;

selecting one playback start position from the received playback start position table;

requesting the transmitting end to transmit the stream data from the selected playback start position; and

receiving and playing the stream data which has been transmitted from the playback start position.

2. The data reception/playback method of Claim 1 wherein:

the playback start position table is stored in a file different from a file containing the stream data;

transmission of the file containing the playback start position table is requested to the transmitting end before reception of the stream data; and

the playback start position table is extracted from the received file containing the table.

3. The data reception/playback method of Claim 1 wherein:
 - the playback start position table, the stream data, and information about the position of the playback start position table are stored in one file;
 - transmission of the file is requested to the transmitting end;
 - the information about the position of the playback start position table is extracted from the data of the file received;
 - transmission of the file from the position indicated by the information about the position of the playback start position table is requested to the transmitting end; and
 - the playback start position table is obtained from the received data.
4. The data reception/playback method of Claim 1, wherein the playback start position table received at the time of data playback is stored, and the stored table is used for the next and later data playback.
5. The data reception/playback method of Claim 1 wherein:
 - when playing the stream data from the head of the stream, the stream data is received and played without requesting transmission of the playback start position table; and
 - when playing the stream data from some midpoint in the stream, transmission of the playback start position table is requested.

6. The data reception/playback method of Claim 3, wherein the information about the position of the playback start position table is stored at the time of data playback, and this positional information is used for the next and later data playback.

7. A data reception/playback apparatus for receiving and playing stream data including at least one of audio and video, said apparatus comprising:

transmission request sending means for sending a transmission request to a transmission apparatus;

reception means for receiving data transmitted from the transmission apparatus in response to the transmission request;

playback start position selection means for selecting a playback start position from a playback start position table where at least one playback start position is stored; and

playback means for playing the stream data;

wherein the transmission request sending means requests the transmission apparatus to transmit the playback start position table, the reception means receives the playback start position table, the transmission start position selection means selects a playback start position from the playback start position table, the transmission request sending means requests the transmission apparatus to transmit the stream data from the playback start position, the reception means receives the stream data, and the

playback means plays the received stream data.

8. A data reception/playback method for receiving and playing stream data including at least one of audio and video, wherein:

when data playback is to be halted temporarily, a request for transmission halt is made to the transmitting end by halting data reception from a lower communication protocol; and

when data playback is to be restarted, a request for transmission restart is made to the transmitting end by restarting data reception from the lower communication protocol.

9. A data reception/playback method for receiving and playing stream data including at least one of audio and video, wherein:

when receiving and playing plural stream data simultaneously by using plural connections which are individually controllable, if reception of stream data in a connection is delayed for a playback time, playback of all the stream data is halted, and a request for suspension of data transmission in the connections including stream data other than the stream data which is delayed in reception, is output to the transmitting end; and

when the quantity of the stream data which is delayed in reception exceeds a predetermined value, playback of all the stream data is restarted, and a request for restart of data transmission in the suspended connections is output to the transmitting end.

10. A data reception/playback apparatus for receiving and playing stream data including at least one of audio and video, said apparatus comprising:

transmission request sending means for requesting a transmission apparatus to transmit plural stream data;

reception means for receiving the stream data;

reception buffer for storing the stream data;

playback means for playing the stream data stored in the reception buffer; and

reception buffer monitor means for monitoring the quantity of data stored in the reception buffer;

wherein, when the reception buffer monitor means detects that reception of stream data is delayed for a playback time, the playback means halts playback of all the stream data, and the transmission request sending means requests the transmission apparatus to suspend data transmission in connections including stream data other than the stream data which is delayed in reception; and

when the reception buffer monitor means detects that the quantity of the stream data which is delayed in reception exceeds a predetermined value, the playback means restarts playback of all the stream data, and the transmission request sending means requests the transmission apparatus to restart data transmission in the connection which is suspended.

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11. A data transmission method for transmitting stream data including at least one of audio and video, according to a playback speed specified by a receiving end, said method comprising the steps of:

having a plurality of files containing stream data of different playback speeds;

receiving a request for transmission of stream data including information of a playback speed, from the receiving end;

selecting a file containing stream data corresponding to the playback speed information; and

transmitting the data of the selected file.

12. A data transmission apparatus for transmitting stream data including at least one of audio and video according to a playback speed specified by a receiving end, said apparatus comprising:

data storage means having, as files, plural stream data having different playback speeds;

playback speed/file mapping table buffer containing a playback speed/file mapping table which indicates the correspondences between the playback speeds and the files;

transmission request reception means for receiving and analyzing a request for transmission stream data from the receiving end;

playback speed information extraction means for extracting information of a playback speed, from the transmission request received by the transmission request reception means;

file selection means for selecting a file corresponding to the playback speed with reference to the playback speed/file mapping table stored in the playback speed/file mapping table buffer;

file reading means for reading the file selected by the file selection means from the data storage means; and

transmission means for transmitting the data of the file read by the file reading means.